

Notice of Allowability

Application No.

10/529,024

Examiner

Chuc D. Tran

Applicant(s)

GRANT ET AL.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 27, 2006.
2. ☒ The allowed claim(s) is/are 1-3,5-10,14-16,18-45 and 48.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

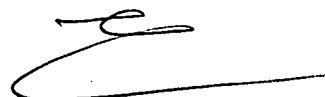
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Michael P. Girard, Tel: (503) 595-5300 on December 12, 2006.

The application has been amended as follows:

Claim 45, line 7, "and second antenna elements" would be changed to - - and second antenna elements, and the first and second antenna elements are tuned, shaped, and/or positioned relative to each other to reduce loss of performance, wherein the first and second antenna elements are oppositely oriented to increase electrical isolation relative to each other - -.

Claim 46 has been cancelled.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 60/414,606, filed on September 27, 2002.

Drawings

3. The drawings were received on March 22, 2005. These drawings are accepted.

Allowable Subject Matter

4. Claims 1-3, 5-10, 14-16, 18-45 and 48 are allowed.

Art Unit: 2821

5. The following is an examiner's statement of reasons for allowance:

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations a feed connecting the base to the platform, a portion of the feed being slanted relative to the base as the feed extends from the base toward the platform, wherein the angle of the feed is adjusted so that the antenna element has a desired height in claim 1. Claims 2-3, 5-10 and 16 are allowed since they are dependent on claim 1.

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations a feed connecting the base to the platform, a portion of the feed being slanted relative to the base as the feed extends from the base toward the platform, wherein the antenna is positioned within a portion of a roof rack of a vehicle in claim 14. Claim 15 is allowed since it is dependent on claim 14.

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations the platform having a radiating lip that projects outwardly over an edge of the ground conductor by a predetermined distance, the platform being supported above the ground conductor by a ground and a feed, wherein the radiating lip forms a capacitive coupling with the edge of the ground conductor, the capacitive coupling partially contributing to an impedance of the antenna element in claim 18. Claim 19 is allowed since it is dependent on claim 18.

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations a conductive feed line electrically coupling a transmission line to the first feed and the second feed, wherein a length of the feed line between the first feed and the second feed creates an impedance such that the second antenna element appears to be substantially an open

Art Unit: 2821

circuit in the first band in claim 20. Claims 21-28 are allowed since they are dependent on claim 20.

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations the first and second antenna elements being positioned on the base such that the outward-facing ends of the first and second antenna elements face substantially opposite directions; and at least one additional antenna element positioned substantially between the first antenna element and the second antenna element, the additional antenna element being configured to receive and/or transmit electromagnetic radiation in one or more additional bands in claim 29. Claims 30-44 are allowed since they are dependent on claim 29.

Prior art Wong fails to teach or suggest in combination with the remaining claimed limitations a third antenna element positioned between and in general axial alignment with the first and second antenna elements, and the first and second antenna elements are tuned, shaped, and/or positioned relative to each other to reduce loss of performance, wherein the first and second antenna elements are oppositely oriented to increase electrical isolation relative to each other in claim 45. Claim 48 is allowed since they are dependent on claim 45.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2821

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC
December 12, 2006



**THO PHAN
PRIMARY EXAMINER**